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INTERNATIONAL BUSINESS MACHINES CORPORATION			CHEEMA, UMAR	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

poiqlaw2@us.ibm.com

Office Action Summary

Application No.

10/583,595

Applicant(s)

BREITER ET AL.

Examiner

UMAR CHEEMA

Art Unit

2444

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 12-26 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 12-26 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-943)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendments

1. This action is in response to the amendment filed on 06/02/2011.
2. Claims 12-26 are pending.
3. Claims 12-26 have been further amended.

Response to Arguments

4. Applicant's arguments with respect to claims 11-26 objection have been fully considered and are persuasive. Examiner has withdrawn objection in view of amendments to claim 11-26.
5. Applicant's arguments and amendments filed on 02 June 2011 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *by amending independent claims 12, 17 and 22 to add the new limitations of "managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76)", has changes the scope of independent claims 12, 17, and 22, and will require further search and consideration*) to the claims which significantly affected the scope thereof.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (hereinafter Bauer) (US Patent No. 6,690,788) in view of AAPA (Applicant's Admitted Prior Art) (Fig.1) (hereinafter AAPA) in view of Gerdes et al. (hereinafter Gerdes) (US Pub. No. 2003/0046541) and further in view of Feridun et al. (hereinafter Feridun) (US Patent No. 6,336,139).

7. As to claims 1-11, (Cancelled).

8. As to claim 12, Bauer discloses management system for managing distributed resources (11-16:61-66) (**135**) (*resource manager*) (*see Fig. 1*) comprising a digital computer managed system (**134**) (*Integrated Work Management Engine*) (*see Fig. 1*) that can execute management workflows in order to actively control the managed resources (11-16; 61-66) which have been registered with said stateful web correlation services (74, 75, 76) (*Work Management engine is responsible for initiation and control of all workflow functions within the system*) (*see at least col. 6, lines 8-24*); said stateful web correlation services (74, 75, 76) providing multiple autonomic correlation services monitoring and controlling part of said managed system that manage different functional parts of the managed system in cooperation with the workflow engine (88) to query the state of managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76) and to communicate with the event server (51)

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while employing correlation engine (174, 175) (*objectives and responsibilities of workflow management system based on rules engine and rules data*) (see at least col. 8, line 58-col. 9, line 56) and a set of rules (184, 185, 196) (*rules engine*) defining how underlying resources (61-66) shall be managed in a correlation model, as said controller (44) communicates with the stateful web correlation services (74-76) to instantiate said stateful web correlation services (74, 75, 76) according to said correlation model (*see at least rules engine and rules data for customer care center in integrated work management system*) (see col. 9, lines 9-56).

9. Although Bauer discloses the substantial features of applicant's claimed invention, Bauer expressly fails to disclose: providing a management client (41) coupled to a controller (44) which communicates with a correlation server (48) and with an event server (51) having managed resources (61-66) to be managed; said correlation server (48) comprising a web service container (71) with correlation services implemented as stateful web correlation services (74, 75, 76) which communicate with each other and with a workflow engine (88).

10. In analogous teaching, AAPA exemplifies this wherein AAPA discloses this where providing a management client (41) coupled to a controller (44) which communicates with a correlation server (48) and with an event server (51) having managed resources (61-66) to be managed; said correlation server (48) comprising a web service container (71) with correlation services implemented as stateful web correlation services (74, 75, 76) which communicate with each other and with a workflow engine (88) (*see AAPA: at least Fig. 1, ¶ (0040), Workflow Engine 8 can execute Management Workflows in order to actively control distributed application or resources 11-16 over a Network 17, as indicated by Arrow 18. Arrows 21, 22 indicate that resources 11-16 communicate with Correlation Engine 2. Arrow 26, 27 indicate*

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that resources 11-16 communicate with a Configuration Database 30. As indicated by Arrow 31, Correlation Engine 2 communicates with Configuration Database 30. Configuration Database 30 is hosted by a Database Server 32).

11. Thus, given the teaching of AAPA, it would have been obvious to one of the ordinary skill person in the art to combine the teaching of Bauer into AAPA for the management of multiple distributed resources. Motivation for doing so would have been well known in the art for monitoring and managing distributed applications or resources in a management system.

12. Although Bauer-AAPA discloses the substantial features of applicant's claimed invention, Bauer expressly fails to further disclose: managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76).

13. In analogous teaching, Gerdes exemplifies this wherein Gerdes discloses this where: managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76) (*see Gerdes: at least paragraphs (0017, 0018, 0022), wherein correlation of the user identities as registered to the service provider and the authentication server, e.g. being a name of the user and a registration server and for identification to the user etc.*).

14. Thus, given the teaching of Gerdes, it would have been obvious to one of the ordinary skill person in the art at the time of the invention to combine the teaching of Bauer-AAPA into Gerdes for managing resources which have been registered with correlation services. Motivation for doing so would have been as well known in the art to have a management system where look up comprises the correlation of the user identities as registered to the service provider and the authentication server (*see Gerdes: paragraph (0017)*).

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15. Although Bauer-AAPA-Gerdes discloses the substantial features of applicant's claimed invention, Bauer expressly fails to disclose: wherein services are autonomic correlation services. Nevertheless, autonomic correlation services were well known in the art at the time of the present invention.

16. In analogous teaching, Feridun exemplifies this wherein Feridun discloses wherein services are autonomic correlation services (*see at least abstract, col. 2, lines 21-25; method of event correlation that preferably implemented within a distributed environment*).

17. Thus, given the teaching of Feridun, it would have been obvious to one of the ordinary skill person in the art at the time of the invention to modify the teaching of Bauer to expressly disclose the management system with event correlation services. It would have been advantageously provide more efficient event correlation techniques within a distributed computer environment wherein distributed monitors use events to convey status changes in monitoring objects within the environment (*Feridun: col. 1, lines 52-55*).

18. As to claim 13, the combination of Bauer-AAPA and Feridun disclose the management system according to claim 12, wherein Feridun further discloses the stateful web correlation services (74-76) directly (92) communicate with managed resources (61-66) (*see Feridun : at least correlation rules adapted to recognize a given pattern of one or more events indicative of given condition*) (*see Fig. 8*) for the motivation of well taught in Feridun, to provide more efficient event correlation techniques within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment (*see Feridun: col. 1, lines 52-55*).

19. As to claim 14, the combination of Bauer-AAPA and Feridun disclose the management system according to claim 12, wherein Feridun further discloses rules for filtering low-level events issued by managed resources (61-66) are deployed into an event service application (50) that is used to filter high-level events from low-level events (*see Feridun: at least abstract, col. 2, lines 4-9; set of simple or "low-level" correlation rules which may be useful in recognizing a given pattern or one or more events indicative of given condition sought to be control or monitor*) for the motivation of well taught in Feridun, to provide more efficient event correlation techniques within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment (*see Feridun: col. 1, lines 52-55*).

20. As to claim 15, the combination of Bauer-AAPA and Feridun disclose the management system according to claim 14, wherein Feridun further discloses the controller (44) communicates with the event service application (50) (*see Feridun: at least abstract, col. 2, lines 4-9; set of simple or "low-level" correlation rules which may be useful in recognizing a given pattern or one or more events indicative of given condition sought to be control or monitor*) for the motivation of well taught in Feridun, to provide more efficient event correlation techniques within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment (*see Feridun: col. 1, lines 52-55*).

21. As to claim 16, the combination of Bauer-AAPA and Feridun disclose the management system according to claim 12, wherein AAPA further discloses the stateful web correlation services Correlation Services are modeled as Stateful Web Services stateful web services to instantiate said correlation services according to a user-defined correlation model, whereby each of said stateful web correlation services can introspect each other and subscribe to events issued by each other, for managing said managed system; wherein each single correlation service manages part of the overall system, and, in said management of part of the overall system, a single correlation service checks whether it contains rules that react to high-level events issued by subordinate correlation services, and uses web service introspection to see which events are issued by another correlation service (*see AAPA: Fig. 1, ¶ (0042), when low-level events are received from managed resources 11-16, as indicated by Arrows 21, 22, Correlation Engine 2 applies event filtering and aggregation rules, as indicated by Arrow 5, in order to filter meaningful information, so called high-level events, out of the mass of received events . . . as indicated by Arrow 31. As a result of decision making, workflows can be invoked, as indicated by Arrow 9, in order to modify the managed system, as indicated by Arrow 18, and to solve problems etc.*) for the motivation of well taught in the AAPA to receive and manage resources based on user-defined and decision making rules.

22. As to claim 17, Bauer discloses a method for managing distributed resources in a digital computer, (135) (*resource manager*) (*see Fig. 1*), comprising: steps executed by digital computer managed system having an internal control system implementing a) a user defined correlation model comprising the definitions of several stateful web correlation services (74, 75,

76) for different functional parts of the managed system providing multiple autonomic correlation services for monitoring and controlling part of said distributed system (***Work Management engine is responsible for initiation and control of all workflow functions within the system***) (see at least col. 6, lines 8-24); and b) wherein a controller of said internal control system instantiates stateful web correlation services (74-76) to run in accordance with the definitions of the user defined correlation model (***rules engine and rules data for customer care center in integrated work management system***) (see at least col. 9, lines 9-56).

23. Although Bauer discloses substantial features of applicant's claimed invention, Bauer expressly fails to disclose: wherein services are autonomic correlation services. Nevertheless, autonomic correlation services were well known in the art at the time of the present invention.

24. In analogous teaching, Feridun exemplifies this wherein Feridun discloses wherein services are autonomic correlation services (see at least abstract, col. 2, lines 21-25; ***method of event correlation that preferably implemented within a distributed environment***).

25. Thus, given the teaching of Feridun, it would have been obvious to one of the ordinary skill person in the art at the time of the invention to modify the teaching of Bauer to expressly disclose the management system with event correlation services. It would have been advantageously provide more efficient event correlation techniques within a distributed computer environment wherein distributed monitors use events to convey status changes in monitoring objects within the environment (*Feridun: col. 1, lines 52-55*).

26. Although Bauer-Feridun discloses the substantial features of applicant's claimed invention, Bauer expressly fails to disclose: c) wherein said user defined correlation model defines how underlying resources (61-66) which have been registered with said stateful web

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correlation services (74, 75, 76) shall be managed as said controller (44) communicates with the stateful web correlation services (74-76) to instantiate said stateful web correlation services (74, 75, 76) according to said correlation model.

27. In analogous teaching, AAPA exemplifies this wherein AAPA discloses this where c) wherein said user defined correlation model defines how underlying resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76) shall be managed as said controller (44) communicates with the stateful web correlation services (74-76) to instantiate said stateful web correlation services (74, 75, 76) according to said correlation model (*see AAPA: Fig. 1, ¶ (0042), user-defined rules contained in the Rules Base 6 describe certain specific events or pattern of events that indicate problems within the managed system. When problems are detected management rules are used to draw the right management decisions and, thus, to solve the problem, as indicated by Arrow 7. Decision making is also based on the state of the managed system; the state of all resources 11-16 can be queried using the Configuration Database 30, as indicated by Arrow 31. As a result of decision making, workflows can be invoked, as indicated by Arrow 9, in order to modify the managed system, as indicated by Arrow 18, and to solve problems*).

28. Thus, given the teaching of AAPA, it would have been obvious to one of the ordinary skill person in the art to combine the teaching of Bauer into AAPA for the management of multiple distributed resources. Motivation for doing so would have been well taught in the AAPA to receive and manage resources based on user-defined and decision making rules.

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29. Although Bauer-AAPA discloses the substantial features of applicant's claimed invention, Bauer expressly fails to further disclose: managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76).

30. In analogous teaching, Gerdes exemplifies this wherein Gerdes discloses this where: managed resources (61-66) which have been registered with said stateful web correlation services (74, 75, 76) (*see Gerdes: at least paragraphs (0017, 0018, 0022), wherein correlation of the user identities as registered to the service provider and the authentication server, e.g. being a name of the user and a registration server and for identification to the user etc.*).

31. Thus, given the teaching of Gerdes, it would have been obvious to one of the ordinary skill person in the art at the time of the invention to combine the teaching of Bauer-AAPA into Gerdes for managing resources which have been registered with correlation services. Motivation for doing so would have been as well known in the art to have a management system where look up comprises the correlation of the user identities as registered to the service provider and the authentication server (*see Gerdes: paragraph (0017)*).

32. As to claim 18, the combination of Bauer-AAPA and Feridun disclose the method according to claim 17, wherein Feridun further comprising handles to all of the resources managed by a single one of said stateful web correlation service (74-76) are stored within that single stateful web correlation service (*see at least abstract, col. 2, lines 4-9; recognizing a given pattern or one or more events indicative of given condition sought to be control or monitor*) for the motivation of well taught in Feridun, to provide more efficient event correlation techniques

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within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment (*see Feridun: col. 1, lines 52-55*).

33. As to claim 19, the combination of Bauer-AAPA and Feridun disclose the method according to claim 17, wherein Feridun further comprising, high-level events to which a specific single one of said stateful web correlation service (74-76) shall react, and in that respective single one of said stateful web correlation service (74-76) creates subscriptions with an event service (50) in order to be notified when such events are detected (*see at least abstract, col. 2, lines 4-9; set of simple or "low-level" correlation rules which may be useful in recognizing a given pattern or one or more events indicative of given condition sought to be control or monitor*) for the motivation of well taught in Feridun, to provide more efficient event correlation techniques within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment (*see Feridun: col. 1, lines 52-55*).

34. As to claim 20, the combination of Bauer-AAPA and Feridun discloses the method according to claim 17, wherein AAPA further comprising, the correlation model provides set of rules that describe how the managed resources shall be managed; and said rules being triggered by detected high-level events, and include queries on resource states and trigger the execution of management workflows; and said correlation model defines a set of high-level events which can be issued by the Correlation Service as a result of said rules, and if detected problems cannot be resolved by a stateful web correlation service, a higher-level stateful web correlation services can

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subscribe for these events to create a hierarchical network as said higher-level stateful web correlation services higher-level stateful web correlation services use web service introspection to see which events are issued by another one of said stateful web correlation service (75, 76) *(see AAPA: Fig. 1, ¶ (0042), when low-level events are received from managed resources 11-16, as indicated by Arrows 21, 22, Correlation Engine 2 applies event filtering and aggregation rules, as indicated by Arrow 5, in order to filter meaningful information, so called high-level events, out of the mass of received events . . . as indicated by Arrow 31. As a result of decision making, workflows can be invoked, as indicated by Arrow 9, in order to modify the managed system, as indicated by Arrow 18, and to solve problems etc.)* for the motivation of well taught in the AAPA to receive and manage resources based on user-defined and decision making rules.

35. As to claim 21, the combination of Bauer-AAPA and Feridun discloses the method according to claim 17, wherein Feridun further comprising, the stateful web correlation services (74-76) trigger the execution of workflows in order to actively manage their resources (61-66) *(see Feridun : at least correlation rules adapted to recognize a given pattern of one or more events indicative of given condition) (see Fig. 8)* for the motivation of well taught in Feridun, to provide more efficient event correlation techniques within distributed computer environment wherein distributed monitors use events to convey status changes in monitored objects within the environment *(see Feridun: col. 1, lines 52-55).*

36. As to claims 22-26, these claimed limitation has already been addressed previously rejected claims 17-21, except being a computer program product stored in the internal memory

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of a digital computer, therefore, are rejected for at least same rational as claims 17-21.

Furthermore, with regards to claims 22-26 being a computer program product, it would have been obvious for the method claims of 17-21 to have been formed through the process of computer program product of claims 22-26.

Conclusion

37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **UMAR CHEEMA** whose telephone number is (571)270-3037. The examiner can normally be reached on **M-F 8:30AM-5:00PM**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter A. Pappas can be reached on 571-272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C./
Examiner, Art Unit 2444

/Djenane M Bayard/
Primary Examiner, Art Unit 2444